

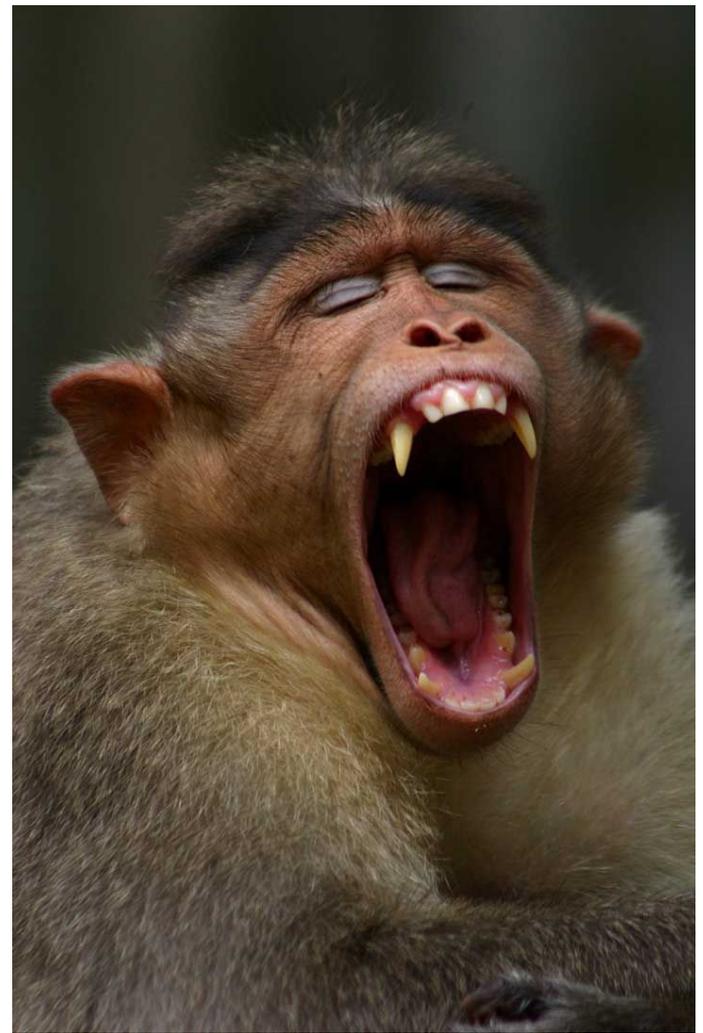


Adaptation

Which organism is more likely to survive in the arctic? Why



Which organism is more likely to survive in the Jungle? Why



Which organism is more likely to survive in the antarctic? Why



Which organism is more likely to survive in the desert ? Why



All organisms have certain unique **traits** that allow them to survive in their **environment**. Organisms who survive long enough to reproduce pass their beneficial traits to their children.

There are two types of traits. What are they?

Genetic/physical and behavioral!

Can you name some examples of each? Think back to the previous slides.

Watch the following clip of a Tarsier hunting



What physical traits do you notice?

What behavioral traits do you notice?

What do these traits accomplish?

CLASS ACTIVITY

Each group will be assigned one of the following animals:

Hawks, Gorillas, Lions, Ants, Squirrels, Scorpions, Snakes, Wolves or Bunnies

In your small groups you will create a list of at least 5 traits that your groups animal possess and how those traits help them to survive in their environment.

Questions to consider when creating your list of traits:

What type of food does my animal eat?

Does my animal rely on other animals within the environment?

How does my animal travel?

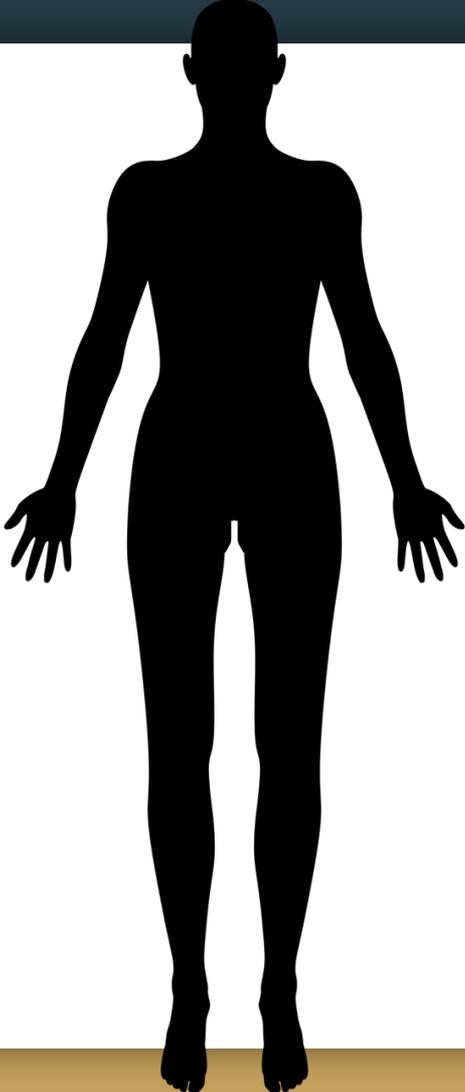
Is my animal solitary or do they tend to stick in large groups?



Example

Humans...

- Sweat to release excess body heat
- Have large brains in proportion to body size in order to predict future events and enable logical thinking
- Walk on 2 feet in order conserve energy and see above tall grasses
- Have a combination of canine teeth and molars to allow for a omnivores diet
- Are social creatures



CLASS ACTIVITY

Each group will be paired with another to compare their animals. An environment will show on the screen and each group will have to decide which of the 2 animals are more likely to survive and thrive in that environment. This will be repeated 2 more times.

Questions to consider:

- How similar is the environment to your animals natural environment?
- What other organisms will your animal have to compete with if moved to this new environment?

Environment 1: Jungle



Environment 2: Plains



Environment 3: Cities



What did you notice?

Did your animal perform exceptionally well in one of the environments? If so what is the term that describes this phenomenon?

This is known as an invasive species, a species who is not native to an environment and thus has no natural predators or competitors.

Where there any common adaptations?

So What About Tarsiers?

- Tarsiers and humans have similar traits — they are both primates
- BUT, Tarsiers have adaptations humans don't, and vice versa
- Thus, Tarsiers and humans share a **common ancestor**
- **Common Ancestor:** Shared origin of species in evolutionary history



In Your Groups, Discuss...

What are the shared adaptations between a tarsier and a human?

What adaptations do Tarsiers have that humans don't have, and vice versa?



Let's Apply What We Know

- We'll watch a short video on the Blood Squirting Eyes of the [Horned Lizard](#)
 - Content warning: The horned lizard video does contain blood. If this makes you uncomfortable you may temporarily leave the room.
- Afterwards, spend 3 minutes illustrating how the horned lizard developed the blood-squirting adaptation
- Spend 5 minutes discussing the questions on your one-pager with your partner



Kahoot Review



Complete the Exit Ticket

Exit Ticket

1. Tarsiers look very different from humans. Using what you have learned from the activity, how could humans and tarsiers share a common ancestor?
2. What advantages that tarsiers have in their environment that help them survive? Could we survive in their environment?
3. How does the evolutionary process contribute to the emergence of new species?